

Abstract ID : 462

Title : Influences of social and habitat features on pup mortality in an endangered population of South American fur seals, *Arctocephalus australis*

Category : Conservation

Student : Not Applicable

Preferred Format : Oral Presentation

Abstract : Populations of South American fur seals in Peru declined 72% from 1996-1998 due to low food availability associated with El Niño. The seals also abandoned important breeding sites in favor of more rugged beaches that appeared dangerous to pups. If historically high pup mortality rates (due to density-dependent factors) persist, recovery of the population may be precluded. We observed marked females with pups to determine whether pup mortality rates within the first 20 days of life were greater in high-density years than low-density years, and for females breeding on rugged rather than flat beaches. We also examined whether microhabitat, social environment, and behavior affected pup survival. Mortality rates at Punta San Juan (PSJ) did not differ between high- and low-density years (24-38% during 1990-93, $n=41-79$, density=1.4 females/m² versus 45% during 1999, $n=37$, density=0.40 females/m²). At Punta Coles (Coles) in 2000 mortality was greater at a rugged beach with heavy surf (32%, $n=117$) than at a flat beach with similar density (20%, $n=229$). At the rugged beach, females whose pups died spent more time exposed to heavy surf and were more likely to have suckled a yearling than females whose pups survived (logistic regression, $p=0.01$). Randomly selected females at the flat beach ($n=169$) spent more time suckling pups ($p<0.001$) and less time exposed to heavy surf ($p=0.02$) than randomly selected females at the rugged beach ($n=169$). Density and aggression were not significant in the model. The use of poor quality habitat – which leads to pups falling or being washed away – appeared to drive high pup mortality rates at low population densities. Also important might be the high percentage of females that suckled yearlings (23-52%). This is most likely attributable to low food availability, and leads to competition between pups and yearlings for milk.